Supplementary Material S1. Search strategy.

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|  | **Database** |
| **Research** **topic** | **PubMed** | **Cochrane** | **Embase** |
| **Study types** | Meta-analy\* [tiab] OR "meta-analysis" [tiab] OR "meta analyses" [tiab] OR "meta analysis" [tiab] OR metaanalysis [tiab] OR "meta-analyze" [tiab] OR "meta-analysis" [Publication Type] OR systematic [sb]1 OR "systematic review" [tiab] | -  | 'Meta analysis'/exp OR 'systematic review'/exp OR meta-analy\*:ti,ab OR 'meta-analysis':ti,ab OR 'meta analyses':ti,ab OR 'meta analysis':ti,ab OR metaanalysis:ti,ab OR 'meta-analyze':ti,ab OR 'systematic review':ti,ab |
| **Protein** | "dietary proteins" [mh] OR "diet, protein-restricted" [mh] OR "whey proteins" [mh] OR protein [tiab] OR proteins [tiab] OR "high-protein" [tiab] OR "low-protein" [tiab] OR "whey powder" [tiab] OR "whey powders" [tiab] OR "hypoprotein diet" [tiab] OR "peptidyl group" [tiab] OR "dairy product" [tiab] OR "dairy products" [tiab] OR "protein-free" [tiab] OR "protein-restricted" [tiab] | [mh "dietary proteins"] OR [mh "diet, protein-restricted"] OR [mh "whey proteins"] OR protein:ti,ab OR proteins:ti,ab OR "high-protein":ti,ab OR "low-protein":ti,ab OR "whey powder":ti,ab OR "whey powders":ti,ab OR "hypoprotein diet":ti,ab OR "peptidyl group":ti,ab OR "dairy product":ti,ab OR "dairy products":ti,ab OR "protein-free":ti,ab OR "protein-restricted":ti,ab | 'protein intake'/exp OR 'protein restriction'/exp OR 'dairy product'/exp OR 'yolk protein'/exp OR 'proteins by anatomical concept'/exp OR 'proteins by organism'/exp OR protein:ti,ab OR proteins:ti,ab OR 'high-protein':ti,ab OR 'low-protein':ti,ab OR 'whey powder':ti,ab OR 'whey powders':ti,ab OR 'hypoprotein diet':ti,ab OR 'peptidyl group':ti,ab OR 'dairy product':ti,ab OR 'dairy products':ti,ab OR 'protein-free':ti,ab OR 'protein-restricted':ti,ab |
| **Bone health** | "musculoskeletal system" [mh] OR "fractures, bone" [mh] OR "musculoskeletal diseases" [mh] OR "musculoskeletal physiological phenomena" [mh] OR accidents [mh] OR musculoskeletal [tiab] OR bone [tiab] OR bones [tiab] OR fracture [tiab] OR fractures [tiab] OR BMC [tiab] OR BMD [tiab] OR osteogenesis [tiab] OR osteoarthritis [tiab] OR osteoarthritic [tiab] OR osteoporosis [tiab] OR osteoporotic [tiab] OR fall [tiab] OR falls [tiab] OR accident [tiab] OR accidents [tiab] OR accidental [tiab] OR skeletal [tiab] OR skeleton [tiab] OR "functional decline" [tiab] OR locomotor [tiab] OR locomotion [tiab] OR orthopedic [tiab] OR orthopaedic [tiab] | [mh "musculoskeletal system"] OR [mh "fractures, bone"] OR [mh "musculoskeletal diseases"] OR [mh "musculoskeletal physiological phenomena"] OR [mh accidents] OR musculoskeletal:ti,ab OR bone:ti,ab OR bones:ti,ab OR fracture:ti,ab OR fractures:ti,ab OR BMC:ti,ab OR BMD:ti,ab OR osteogenesis:ti,ab OR osteoarthritis:ti,ab OR osteoarthritic:ti,ab OR osteoporosis:ti,ab OR osteoporotic:ti,ab OR fall:ti,ab OR falls:ti,ab OR accident:ti,ab OR accidents:ti,ab OR accidental:ti,ab OR skeletal:ti,ab OR skeleton:ti,ab OR "functional decline":ti,ab OR locomotor:ti,ab OR locomotion:ti,ab OR orthopedic:ti,ab OR orthopaedic:ti,ab | 'musculoskeletal system'/exp OR fracture/exp OR 'musculoskeletal disease'/exp OR 'musculoskeletal function'/exp OR accident/exp OR musculoskeletal:ti,ab OR bone:ti,ab OR bones:ti,ab OR fracture:ti,ab OR fractures:ti,ab OR BMC:ti,ab OR BMD:ti,ab OR osteogenesis:ti,ab OR osteoarthritis:ti,ab OR osteoarthritic:ti,ab OR osteoporosis:ti,ab OR osteoporotic:ti,ab OR fall:ti,ab OR falls:ti,ab OR accident:ti,ab OR accidents:ti,ab OR accidental:ti,ab OR skeletal:ti,ab OR skeleton:ti,ab OR 'functional decline':ti,ab OR locomotor:ti,ab OR locomotion:ti,ab OR orthopedic:ti,ab OR orthopaedic:ti,ab |

/exp: exploded Emtree terms; mh: MeSH terms; [sb]: subject search; tiab: title/abstract.

1 PubMed has changed the search strategy of its [sb]-filter for identifying systematic reviews in 01/2019. To maintain continuity we used this previous version for all our literature searches: (systematic review [ti] OR meta-analysis [pt] OR meta-analysis [ti] OR systematic literature review [ti] OR this systematic review [tw] OR pooling project [tw] OR (systematic review [tiab] AND review [pt]) OR meta synthesis [ti] OR meta synthesis [ti] OR integrative review [tw] OR integrative research review [tw] OR rapid review [tw] OR consensus development conference [pt] OR practice guideline [pt] OR drug class reviews [ti] OR cochrane database syst rev [ta] OR acp journal club [ta] OR health technol assess [ta] OR evid rep technol assess summ [ta] OR jbi database system rev implement rep [ta]) OR (clinical guideline [tw] AND management [tw]) OR ((evidence based[ti] OR evidence-based medicine [mh] OR best practice\* [ti] OR evidence synthesis [tiab]) AND (review [pt] OR diseases category[mh] OR behavior and behavior mechanisms [mh] OR therapeutics [mh] OR "evaluation studies" [pt] OR “validation studies” [pt] OR guideline [pt] OR pmcbook)) OR ((systematic [tw] OR systematically [tw] OR critical [tiab] OR (study selection [tw]) OR (predetermined [tw] OR inclusion [tw] AND criteri\* [tw]) OR exclusion criteri\* [tw] OR main outcome measures [tw] OR standard of care [tw] OR standards of care [tw]) AND (survey [tiab] OR surveys [tiab] OR overview\* [tw] OR review [tiab] OR reviews [tiab] OR search\* [tw] OR handsearch [tw] OR analysis [ti] OR critique [tiab] OR appraisal [tw] OR (reduction [tw] AND (risk [mh] OR risk [tw]) AND (death OR recurrence))) AND (literature [tiab] OR articles [tiab] OR publications [tiab] OR publication [tiab] OR bibliography [tiab] OR bibliographies [tiab] OR published [tiab] OR pooled data [tw] OR unpublished [tw] OR citation [tw] OR citations [tw] OR database [tiab] OR internet [tiab] OR textbooks [tiab] OR references [tw] OR scales [tw] OR papers [tw] OR datasets [tw] OR trials [tiab] OR meta-analy\* [tw] OR (clinical [tiab] AND studies [tiab]) OR treatment outcome [mh] OR treatment outcome [tw] OR pmcbook)) NOT (letter [pt] OR newspaper article [pt])